TO INNOVATE THE POTENTIAL USED OF ARC AND OXY-ACETYLENE WELDING TO PRODUCE 3 DIMENSIONAL FORM AS AN ALTERNATIVE TO FOUNDRY WORK

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Contents

2. Letter of Offer (Research Grant)

Surat Kami : 600-RMI/SSP/DANA 5/3/Dsp (/2011)
Tarikh : April 2011

En Mohd Razif Mohd Rathi
Fakulti Seni Lukis dan Seni Reka
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Y. Brs. Prof./Tuan/Puan

KELULUSAN PERMOHONAN DANA KECEMERLANGAN 04/2011

Tajuk Projek	:	To Investigate the Potential Use of Arc and Oxy-Acetylene Welding Tools and Technique to Produce 3 Dimensional Form as an Alternative to Foundry Work
Kod Projek	:	600-RMI/SSP/DANA 5/3/Dsp (/2011)
Kategori Projek	:	Kategori F (2011)
Tempoh	:	1 April 2011 – 31 Mac 2012 (12 bulan)
Jumlah Peruntukan	:	RM 5,000.00
Ketua Projek	:	En Mohd Razif Mohd Rathi

Dengan hormatnya perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan pihak Universiti telah meluluskan cadangan penyelidikan Y. Brs Prof./tuan/puan untuk membiayai projek penyelidikan di bawah Dana Kecemerlangan UiTM.

3. Bagi pihak Universiti kami mengucapkan tahniah kepada Y. Brs. Prof./tuan/puan kerana kejayaan ini dan seterusnya diharapkan berjaya menyiapkan projek ini dengan cemerlang.

4. Peruntukan kewangan akan disalurkan melalui tiga (3) peringkat berdasarkan kepada laporan kemajuan serta kewangan yang mencapai perbelanjaan lebih kurang 50% dari peruntukan yang diterima.

Peringkat Pertama	20%
Peringkat Kedua	40%
Peringkat Ketiga	40%

5. Untuk tujuan mengemaskini, pihak Y. Brs. Prof./tuan/puan adalah diminta untuk melengkapkan semula kertas cadangan penyelidikan sekiranya perlu, mengisi borang setuju terima projek penyelidikan dan menyusun perancangan semula bajet yang baru seperti yang diluluskan. Sila lihat lampiran bagi tatacara tambahan untuk pengurusan projek.

Sekian, harap maklum.

"SELAMAT MENJALANKAN PENYELIDIKAN DENGAN JAYANYA"

Yang benar

DR. OSKAR HASDINOR HASSAN
Ketua Penyelidikan (Sains Sosial dan Pengurusan)

5.2 Enhanced Executive Summary

This research is to innovate the potential used of Arc and Oxy-Acetylene welding tools and technique to produce three-dimensional forms as an alternative to foundry work. The Arc and Oxy-Acetylene tools commonly used by welder limited to jointing works. However, the researcher believes that the melting capabilities of the Arc and Oxy-Acetylene can be harnessed and be used to create other creative products. This research focus on fabricating three types of metal- copper, brass on mild steel structure to form layers of "surface skin" in replace of foundry work treatment (casting work). The advantage of this process is to offset or replace the expensive of foundry work. This process when applied to the production of creative work produces very rich tactile textures that complement the design. The flexibility of the process/ technique is easily adopted by experience welder and sculptor as such it will be an added value to their profession, to commercialize their product.

5.3 Introduction

According to Herbert Read in his book "Modern Sculpture", metal in general have certain unique qualities such as they can ductile, which means that they can be drawn out into wires, and they are malleable, which means that they can be shaped into form by hammering, and they can be melted and cast, molded into predetermined shapes or pressed. As a modern sculptor, they must take this advantage of all this possibilities for example wire sculpture by Picasso, Calder, Kricke, Butler, Lassaw, David Smith, and many others, welded sheet iron by Lardera, Jacobsen, Cesar and Muller, wrought iron or steel, and many combinations and variations of these techniques. David Smith (1952) explained that welding made this technically possible, by permitting the artist to fabricate his pieces quickly and to work with improvisational manner. He could experiment with forms and remove or alter them at will.

Based on above statement, we can conclude that welding has enormously influential in the development of sculpture in the 20th century. It's permitting the opening up of form so that sculpture could be less massive, immediate and direct, it also requires less time to realize than bronze casting.

As far as technique in producing metal sculpture is concerned, there must be a technique, and machine that can help the sculptor to realize their ideas. Other technique besides welding that due with metal is by using lost wax casting technique that allow sculptor to transferring object or duplicating it in an almost perfect shapes. This technique had to deal with foundry and the process is very labor intensive. The process much more expensive in a way of production and it is not a popular choice of technique among sculptors to produce their sculpture.

Hence, today, sculptors produce various kinds of welded sculptures methods using different techniques and materials due to aesthetic purposed. The welding machines that is commonly used among the sculptors such as arc welding and oxy acetylene gas welding that affordable and economic in such a way and technically possible, it permitting the artist to fabricate his pieces quickly and to work with improvisational manner.

"However, welded sculpture is also finding new customers. It is cheaper than cast works, and, by its nature, each object is unique."

(Time, Metal Sculpture: Machine Age Art, August 1995)